



Talsim-NG - River Basin and Water Management Model

Understanding the Calculation of Time Steps

Before we start !

Settings:

- Decimal delimiter = „.“ (dot)
- Date / Time Settings = dd/MM/yyyy or dd.MM.yyyy

Date and time formats

Short date:

Long date:

Short time:

Long time:

First day of week:

Decimal symbol:

No. of digits after decimal:

Digit grouping symbol:

Digit grouping:

Negative sign symbol:

Negative number format:

Display leading zeros:

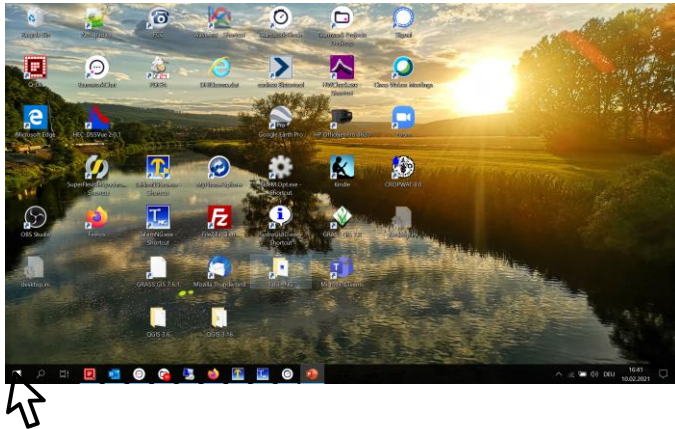
List separator:

Measurement system:

Running the software



The Talsim-NG Server must be started first before you start the client software



Startmenu and look up Talsim-NG Server



Or

Create a shortcut on your desktop



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TALSIM-NG – Simulation Run: Overview

A simulation run consists of the following steps:

1. The user selects the **Simulation** from within the **Project Manager**
2. Talsim-NG exports the dataset
3. The Simulation Engine is started and performs the simulation
4. Talsim-NG imports the results after the Engine indicates the end of the simulation
5. The results are imported and can be used

Is it important to understand how Talsim-NG calculates a time step in order to be able to set properties right with respect to operation rules.

That affects:

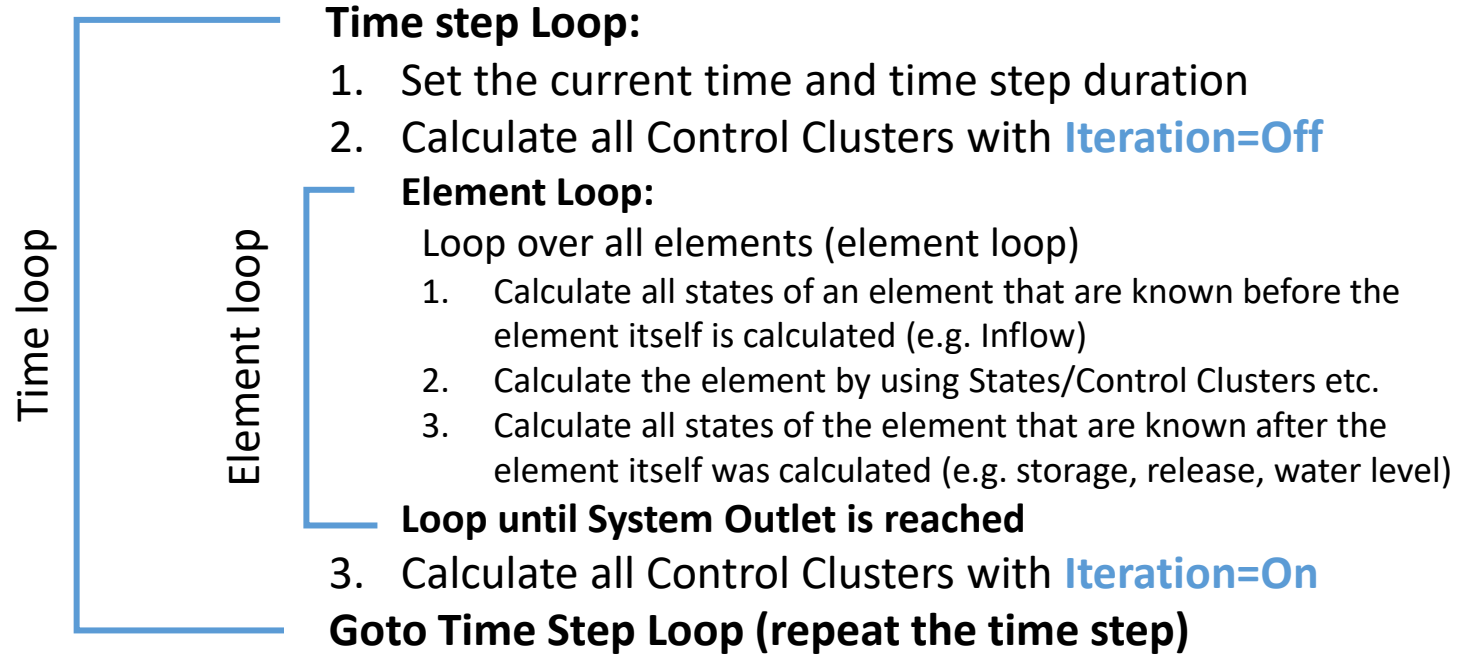
- State variables
- Control clusters
- Reservoir releases

Problem: Reservoirs, releases, states and operation rules may depend on each other

How Talsim-NG calculates one time step?

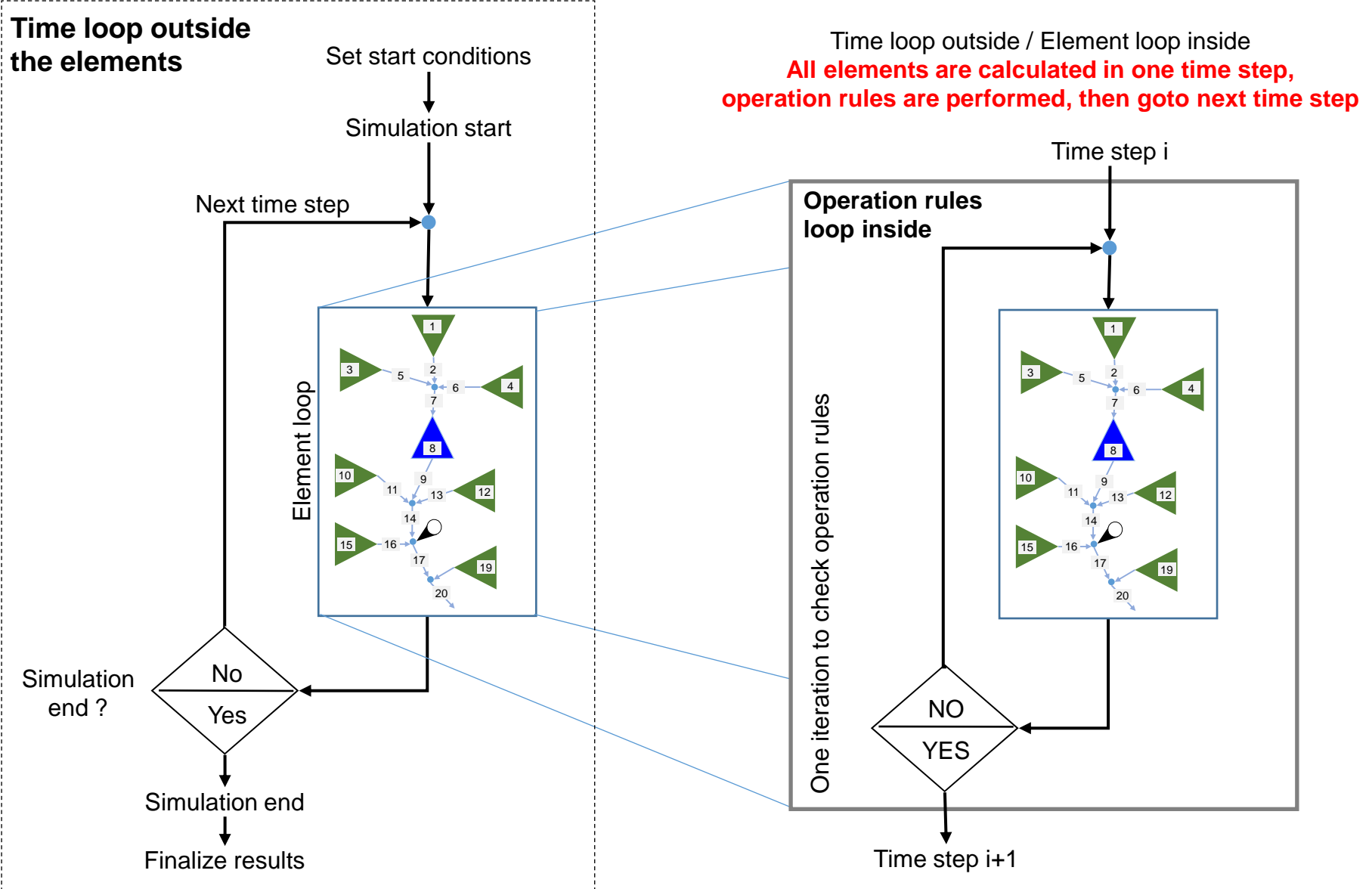
Set start conditions for all elements

Begin Simulation



Loop until Simulation End is reached

How Talsim-NG calculates one time step?



How Talsim-NG calculates one time step?

Practical hints:

- State variables usually have **Iteration = Off**
(they are calculated twice during each time step, to make sure they are updated)
- Control clusters for determining releases can be set with **Iteration= On** or **Off**
(they must be known prior to calculating releases, so one iteration is required)
- Control clusters for general purposes (calculate hydropower) should be set with **Iteration= On**
(results appear to be correct only when clusters are calculated again after all elements are ready)